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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,888	08/02/2001	David Bongfeldt	9-15000-9US	5325

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EXAMINER

SOBUTKA, PHILIP

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/919,888

Applicant(s)

BONGFELDT, DAVID

Examiner

Philip J. Sobutka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 31-56 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7-9,15,16,22-24,30,57,58,64-66 and 72 is/are rejected.
- 7) ☒ Claim(s) 2-6,10-14,17-21,25-29,59-63 and 67-71 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/02,8/04.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-3,57-72, drawn to repeater transmit/receive feedback, classified in class 455, subclass 24.
  - II. Claims 31-56, drawn to directive nulls, classified in class 455, subclass 25.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as being used in a repeater that does not direct the spatial nulls. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Kent Daniels on September 13, 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-30,57-72. Affirmation of this election must be made by applicant in replying to this Office action. Claims 31-56 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1,7-9,15,16,22-24,57,64-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Bi et al (US 5,835,848).

Consider claims 16,57. Bi teaches a repeater comprising: a signal generator adapted to generate a signature signal associated with the repeater (Bi see especially fig 2, item 40, col 2, lines 53-65); a first modulator adapted insert the signature signal into first signal transmitted by repeater (Bi see especially fig 2, item 27); a detector adapted to detect a correlation between the signature signal and a second signal received by the repeater (Bi see especially fig 2, item 36); and a controller adapted to control an effective radiated power (ERP) of the first signal transmitted by the repeater, based on the detected correlation (Bi see especially col 3, lines 1-18).

As to claim 1, the system of Bi would perform the claimed steps.

As to claims 7,8,22,23,64, 65, note that Bi teaches the controlled parameters comprising power level and a phase (Bi see especially fig 2).

As to claims 9, 24, 66, note that Bi's repeater would simultaneously modulate the parameter of all signals within a predetermined wide-band signal path.

As to claim 15, Bi teaches comparing the detected correlation to a predetermined threshold value; and determines an optimum value of a gain of the repeater using the comparison result (Bi see especially col 3, lines 1-20).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 30,58,72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bi.

As to claims 30,72, Bi teaches everything claimed including comparing the detected correlation to a predetermined threshold value; and determines an optimum value of a gain of the repeater using the comparison result (Bi see especially col 3, lines 1-20). Bi lacks a teaching of a software code controlling the detection and determination. Official Notice is taken that it is notoriously well known in the art to use software code to control processes. It would have been obvious to one of ordinary skill in the art to modify Bi to use software code in order to allow the method to be easily programmed into a device.

As to claim 58, note that Bi lacks a teaching any that the pilot is required to be the same as every other repeaters signal, therefore it would have been obvious that different pilot signals for each repeater may simply be a result a random selection.

***Allowable Subject Matter***

9. Claims 2-6,10-14,17-21,25-29,59-63,67-71 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 2, the nearest prior art as shown in Bi fails to teach the method of claim 1, wherein the step of generating the signature comprises generating a code signal and shaping the code signal.

Consider claim 17, the nearest prior art as shown in Bi fails to teach the system of claim 16, wherein the step of generating the signature comprises generating a code signal and shaping the code signal.

Consider claim 59, the nearest prior art as shown in Bi fails to teach the system of claim 57, wherein the signal generator comprises: a code generator adapted to generate a code signal; and a signal shaper adapted to shape the code signal.

Consider claim 10, the nearest prior art as shown in Bi fails to teach the method of claim 1, wherein the detecting step comprises: a monitoring to detect at least a signal component of the second signal that is consistent with the signature signal; and comparing the detected signal component to the signature signal, and generating a correlation signal indicative of a degree of similarity between the detected signal component and the signature signal.

Consider claim 25, the nearest prior art as shown in Bi fails to teach the system of claim 16, wherein the detector comprises: a monitor adapted detect at least a signal component of the second signal that is consistent with the signature signal; and a first

comparator adapted to compare detected signal component to the signature signal, and generate a correlation signal indicative of a degree of similarity between the detected signal component and the signature signal.

Consider claim 67, the nearest prior art as shown in Bi fails to teach the repeater of claim 57, wherein the detector comprises: a monitor adapted detect at least a signal component of the second signal that is consistent with the signature signal; and a first comparator adapted to compare detected signal component to the signature signal, and generate a correlation signal indicative of a degree of similarity between the detected signal component and the signature signal.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J Sobutka whose telephone number is 571-272-7887. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882.

11. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-

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872-9306) will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Philip J Sobutka

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**NAY MAUNG**  
**SUPERVISORY PATENT EXAMINER**